Remarks

The present amendment responds to the Official Action dated July 12, 2005. The Official action requested that the Abstract be amended to more closely reflect the inventive features as claimed. The Official Action also requested that the Applicants identify a drawing figure best representing the claimed invention. Claims 1-11 were rejected under 35 U.S.C. §112, second paragraph as being indefinite. Claims 7-11 were rejected under 35 U.S.C. §102(b) based on Gardner et al. U.S. Patent No. 5,216,751(Gardner). These grounds of rejection are addressed below.

Claims 1 and 7 have been amended to be more clear and distinct. Claims 1-11 are presently pending.

Specification Amendment

The Abstract has been amended as requested by the Official Action.

Request to Identify Drawing Figure Best Representing the Claimed Invention

While no single drawing figure or figures can be said to "best" illustrate the claimed invention, as the claims are construed in light of the specification as a whole, The Examiner's attention is directed to Fig. 11 which illustrates an exemplary eventpoint chaining apparatus 1100. The eventpoint chaining apparatus 1100 includes chained eventpoint modules 1102, 1104, 1106, 1108, 1110, 1112, 1114, 1116, 1118, and 1121-1123 as presently claimed. Additionally, Figs. 5 and 9 illustrate further details of the exemplary eventpoint modules.

Section 112, Second Paragraph Rejection

Claims 1 and 7 have been amended to address the above rejection. Claim 1 has been amended to include "detecting an occurrence of a first processor event (p-event)" and "causing a processor action (p-action) in response to the occurrence of both the first and second p-events." Claim 1 has also been amended to clarify the acronym "EP." Claims 1 and 7 have also been amended to clarify that a processor action (p-action) is dependent on the occurrence of at least two processor events. Claims 1 and 7 have also been amended to clarify that an eventpoint interrupt signal causes a p-action. Consequently, this rejection should be withdrawn and claims 1-6 allowed as no art rejection was made for these claims.

The Art Rejections

As addressed in greater detail below, Gardner does not support the Official Action's reading of it and the rejection based thereupon should be reconsidered and withdrawn. Further, the Applicant does not acquiesce in the analysis of Gardner made by the Official Action and, in light of the present clarifying claim amendments, respectfully traverses the Official Action's analysis underlying its rejections.

Section 102(b) Rejection of Claims 7-11 based on Gardner

Gardner addresses an artificial neural network 10 having a number of neuron slices serially coupled in a computation ring 30 to handle complex neural arrangements. Gardner, col. 4, lines 47-50 and Fig. 1. One of Gardner's neuron slices includes a feedforward processor 40 including weight memory 42 coupled for receiving a 3 bit address word. Gardner, col. 5, lines

11-13. Gardner's neural network appears to have nothing to do with an eventpoint chaining apparatus as presently claimed.

In stark contract to Gardner, the present invention addresses an eventpoint chaining apparatus which advantageously allows multiple preconditions to be detected such as two or more processor events before a processor action (p-action) is invoked. The eventpoint chaining apparatus includes a processing element having at least first and second programmable eventpoint modules. The eventpoint modules detect their respective p-events and are coupled to each other so that a p-action is caused after both respective p-events are detected. To this end, when the first eventpoint module detects its p-event, it produces an OutTrigger (OT) signal to the second eventpoint module indicating that its p-event has been detected. Meanwhile, the second eventpoint module detects its p-event. If both p-events are detected, the second eventpoint module produces an eventpoint (EP) interrupt signal to cause a processor action which is dependent on both p-events being detected.

By way of example, an eventpoint chaining apparatus may be used to debug software running in a processor. In such an environment, the first programmable eventpoint module may be programmed to detect the occurrence of a first address and the second programmable eventpoint module may be programmed to detect the occurrence of a second address. Upon the occurrence of both addresses, the contents of these addresses may be reviewed, allowing two seemingly unrelated addresses to be reviewed only after both of them have been accessed. Claim 7, as presently amended reads as follows:

> 7. An eventpoint chaining apparatus for generalized event detection and action specification in a processing environment comprising:

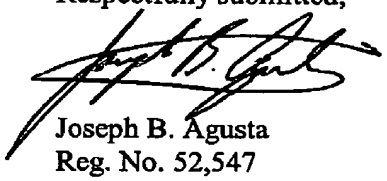
> a processing element having at least a first and a second programmable eventpoint module, each programmable eventpoint module having an input trigger (InTrig) input, a first output, and a second output;
>
> the InTrig of the second eventpoint module connected to the first output of the first eventpoint module, the first programmable eventpoint module detecting an occurrence of a first processor event (p-event) and producing an OutTrigger (OT) signal over the first output of the first programmable eventpoint module; and
>
> the second programmable eventpoint module receiving the OT signal over the InTrig input, detecting an occurrence of a second p-event and, in response to the received OT signal and detected second p-event, producing an eventpoint (EP) interrupt signal over the second output to cause a processor action (p-action) in response to the occurrence of both the first and second p-events. (emphasis added)

Gardner does not disclose and does not make obvious an eventpoint chaining apparatus for generalized event detection and action specification in a processing environment. Gardner does not disclose and does not make obvious "a processing element having at least a first and a second programmable eventpoint module," as presently claimed in claim 7. Gardner does not disclose and does not make obvious "the second programmable eventpoint module receiving the OT signal over the InTrig input, detecting an occurrence of a second p-event and, in response to the received OT signal and detected second p-event, producing an eventpoint (EP) interrupt signal over the second output to cause a processor action (p-action) in response to the occurrence of both the first and second p-events," as presently claimed in claim 7. Gardner merely addresses an artificial neural network having neuron slices which has no structural or operation resemblance to the eventpoint chaining apparatus as presently claimed.

Conclusion

All of the presently pending claims, as amended, appearing to define over the applied references, withdrawal of the present rejection and prompt allowance are requested.

Respectfully submitted,



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